

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**PHARM.D YEAR-1 EXAMINATION – WINTER - 2024**

**Subject Code: 818803****Date: 06-12-2024****Subject Name: Medicinal Biochemistry****Time: 10:30 AM TO 1:30 PM****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|-------------|-----|--|-----------|
| <b>Q.1</b>  | (a) | Define glycolysis? Describe the biochemical pathway for the breakdown of glucose to pyruvate and lactate. Write about the energetic. | <b>06</b> |
|             | (b) | Write a note on Glycogen Storage Disease.  | <b>04</b> |
|             | (c) | Explain citric acid cycle & its amphibolic nature.   | <b>04</b> |
| <b>Q.2</b>  | (a) | Discuss components and reactions of the electron transport chain.  | <b>06</b> |
|             | (b) | Draw a cell Diagram & label different cell Organelles. Write functions of Mitochondria & nucleus.                                    | <b>04</b> |
|             | (c) | Write in brief about significance of Glucose tolerance test.   | <b>04</b> |
| <b>Q.3</b>  | (a) | Discuss $\beta$ -oxidation of fatty acids along with its energetic.  | <b>06</b> |
|             | (b) | Define an enzyme? Outline the IUB classification of enzymes with examples. Explain the mechanism of enzyme action.                   | <b>04</b> |
|             | (c) | Discuss in detail Cholesterol Biosynthesis.  | <b>04</b> |
| <b>Q.4</b>  | (a) | Describe the de novo synthesis of purine nucleotides.  | <b>06</b> |
|             | (b) | Discuss in detail transamination and deamination reactions for amino acids metabolism.   | <b>04</b> |
|             | (c) | Write about reaction of Krebs-Henseleit cycle and enlist disorders of the cycle.   | <b>04</b> |
| <b>Q.5</b>  | (a) | Describe in brief DNA replication.   | <b>06</b> |
|             | (b) | Write in brief Genetic code. Add a note on various inhibitors for protein synthesis.   | <b>04</b> |
|             | (c) | Write a short note on Radio immuno assay.  | <b>04</b> |
| <b>Q. 6</b> | (a) | Discuss the Synthesis of Glucose from Non-Carbohydrate sources.  | <b>06</b> |
|             | (b) | Write a note on importance of water and water balance in human body.   | <b>04</b> |
|             | (c) | Explain the chemiosmotic theory of oxidative phosphorylation.  | <b>04</b> |
| <b>Q.7</b>  | (a) | Write a short note on 1) Lipoprotein 2) Liver function test  | <b>06</b> |
|             | (b) | Discuss the transport process across the cell membranes.   | <b>04</b> |
|             | (c) | Enlist the tests to assess the renal function? Explain the clearance tests for creatinine and urea.                                  | <b>04</b> |

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